EPA United States Environmental Protection Agency

FOX RIVER CURRENT

Update from the Lower Fox River Intergovernmental Partnership

Vol. 2, No. 1 March/April 1999

DNR Recently Released Draft Studies Detailing Lower Fox River Risks, Cleanup Options

Inside

The state recently asked people to review and comment on three new draft studies that outline many alternatives for cleaning up polychlorinated biphenyls (PCBs) from sediments in the Lower Fox River. The draft studies provide important information about the health threat posed by PCBs, the levels and locations of the contaminants in the river, and how different cleanup remedies stack up against one another. The draft studies were recently completed by Thermoretec, Inc., a private consultant hired by the department with funding from the U.S. Environmental Protection Agency (EPA).

The public-comment period for the draft Remedial Investigation/Feasibility Study/Risk Assessment (RI/FS/RA) ran from February 26 to April 12, with public meetings March 22 in Green Bay and March 23 in Appleton. Any public comments the department receives on the findings will be considered as the Wisconsin Department of Natural Resources (DNR) and EPA choose a method for cleaning up the Fox, a decision expected late this year. Public acceptance is one of nine criteria for choosing a cleanup method. Any new information from the pilot cleanup projects will also be added to the final reports.

The draft studies are available at libraries from Oshkosh to Door County. The reports and summaries are also posted on DNR's Web site at www.dnr.state.wi.us/org/water/wm/lowerfox/.

The first study is a Remedial Investigation (RI) that identifies the concentrations and locations of contamination in the Lower Fox River. The investigation confirmed that PCBs in river sediments are the most pervasive pollutant in the Lower Fox River.

About this newsletter

The second study, a Risk Assessment (RA), details potential threats to the environment and public health, citing research on fish and wildlife living in and along the river and the people who eat them, and citing research from around the globe that has investigated PCBs' health effects. The risk assessment showed that eating fish with PCBs is the main threat to people's health.

The third study, the Feasibility Study (FS), evaluates and compares the different cleanup methods against factors such as cost, technical aspects, and public acceptance of the cleanup method. It presents many cleanup alternatives that would reduce risks to people and wildlife who eat fish regularly. The study also aims to develop a cleanup plan that would help the river eventually meet water-quality standards and reduce the flow of PCBs into Green Bay and the Great Lakes without releasing the chemicals during the process.

The feasibility study divided the river into four stretches and tailored cleanup plans for the conditions in each stretch. A range of cleanup technologies is under consideration at this point, including: removing PCB-contaminated sediment by dredging; isolating contamination in slow-moving sections of the river by capping; and heating sediments to destroy PCBs attached to river sediments.

Once these studies are final, the agency will develop a proposed cleanup plan and take it to the public for another round of comments. The proposed plan will include more detailed information on costs and time-frames for carrying out the cleanup. A final cleanup plan is expected by the end of the year.

United States Environmental Protection Agency

Region 5
77 W Jackson Blvd
Chicago, IL 60604

(312) 353-2000
or
(800) 621-8431
(IL, IN, MI, MN, OH, and WI only)

Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/14/99

FOX RIVER CURRENT

Small-Group Meetings Addressed PCB Cleanup Possibilities

Small groups talked about polychlorinated biphenyl (PCB) contamination in the Lower Fox River at public meetings hosted by the Wisconsin Department of Natural Resources (DNR) last October. Around 120 area residents attended meetings in Oshkosh, Appleton, Little Chute and Green Bay. Another dozen responded to questions by mail or E-mail. The meetings gave citizens with diverse perspectives the opportunity to discuss their goals for cleaning up the Lower Fox River. It also gave DNR technical staff public input to consider while developing the whole-river cleanup strategy (Remedial Investigation, Feasibility Study and Risk Assessment, or RI/FS/RA). Here's a glimpse of what people had to say.

How do you use the river or what do you appreciate most about the river?

Many appreciated the river's historical significance and its scenic beauty. Others were in awe of its industrial muscle and power-generating ability. Some residents spent time boating, canoeing, swimming and fishing. Others mentioned that they still enjoy the view, but limit their interactions to that. Most were eager to deal with the down side of industrial use.

What are reasonable cleanup goals for the Lower Fox River?

People wanted to see innovative solutions that wouldn't break the bank. Many said they would prefer to finish cleanup now and deal with liability for cleanup costs later. These people had a sense of urgency to stop PCBs from spreading any further into Green Bay and the Great Lakes.

Many attendees agreed with the proposed goal to lift consumption advisories in 10-15 years. They saw successful cleanup and restoration as a long-term commitment that would require the support of current and future generations. People did not suggest a piecemeal cleanup -- they wanted to see a permanent and protective one. They agreed that a reasonable solution would balance human, environmental and economic health.

Some residents said that the PCB problem was not scientifically proven and that Mother Nature could do a better job than anyone in taking care of it. Others suggested holding off on cleanup until better technology presents itself.

Runoff pollution, algae blooms, and garbage in the river were other problems that people wanted addressed.

Who caused the PCB problem?

A lot of people pointed to the paper companies that released PCBs into the river during the processing of carbonless copy paper. Some added the municipal sewer systems that carried the wastewater. Many looked at PCB contamination in a broader social and economic context that complicated who and what to blame. They said that anyone who benefited by producing, using or recycling these paper products contributed to the problem. People also wondered why Monsanto, the company that invented PCBs, was not on the list of potentially responsible parties.

Who should supervise?

Some believed EPA should lead the cleanup under the federal Superfund program, while others believed that just DNR should. Most believed that a public/private partnership representing governmental entities, mills and other stakeholders made the most sense.

Who should pay?

Many attendees said that funding should come from paper mills and local, state, and federal governments. Just as many believed that the polluters should pay and named the Fox River Group. Some believed that nature offered a free cleanup plan.

Representation in decision making

People want more public discussions of the cleanup decisions that potentially affect their communities. They encouraged more experts and stakeholders to attend. Some were cynical about the weight their opinions would carry with decision makers and exactly how comments would be considered.

Thoughts on outreach and education

Overall, people appreciated the chance to listen to other community members. They also liked the insight that technical experts provided as needed. Many noted that clear ground rules and facilitation made for productive, balanced discussions where everyone had equal time to contribute. They wanted to see similar public meetings in the future and requested more flexibility in directing discussion topics to suit the groups' needs.

Participants requested more background information on cleanup technologies, disposal, economic impact, available health studies and legal aspects. They wanted to know how living with pollution and paying for cleanup would affect them.

The cleanup plan

People were eager to see the draft RI/FS/RA. They wanted to hear about actual cleanup recommendations and the processes needed to achieve them. Most agreed on the need for active cleanup, although a vocal minority expressed that no action was the best option on the table.

The big picture

Most people believed that society and science could tackle the complex issues attached to PCBs as persistently as the molecule sticks to river mud. Some believed that the area could afford to wait until enough money and the perfect cleanup solution conjure themselves. But overall, participants were ready and willing to work toward a solution with substance. They offered keen observations and creative ideas on an issue with few easy answers.

The summary and full proceedings for these meetings are posted on DNR's Lower Fox Web page at www.dnr.state.wi.us/org/water/wm/lowerfox/ Either can be requested by contacting Irene Sadowski by email at sadowi@dnr.state.wi.us; by mail at Wisconsin Department of Natural Resources, Bureau of Communication and Education, 101 S. Webster St., Box 7921, Madison, WI 53707-7921; or by phone at 608-264-8952.

Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/13/99

FOX RIVER CURRENT

Preliminary Results From Deposit N Are In; 56/57 Postponed

Preliminary data is in for an environmental cleanup project the Wisconsin Department of Natural Resources (DNR) began last fall in the Lower Fox River near Kimberly and Little Chute. An interim report suggests that dredging, treatment and disposal techniques used for the Deposit N pilot project safely and successfully removed sediments contaminated with polychlorinated biphenyls (PCBs). However, the DNR is waiting for more results before deciding if cleanup at the site is complete.

Divers prepare to survey Deposit N on the Lower Fox River

The preliminary report estimates that the cleanup removed 100 pounds of PCBs tied up in roughly 4,600 cubic yards of sediment at the 3-acre site. The project focused on removing the sediments with PCB concentrations over 50 parts per million (ppm). The heavier, sandy sediments left behind are in a section where PCB concentrations average between 1-10 ppm. Around 1,600 tons of dried sediment with high PCB concentrations were shipped to Wayne Disposal Landfill in Michigan for disposal, while approximately 903 tons of low-level material went to Winnebago County's Sunnyview Landfill. Test results will show how much contamination remained after a hydraulic dredge siphoned sediments off the river bottom. In the meantime, the DNR is reviewing the interim report summarizing the work completed before icy conditions shut the project down late last year. Sediment, river water, treated water returned to the river and air were continually monitored to document if cleanup affected river conditions. By July, the DNR expects analyses quantifying how much, if any, PCB-contaminated sediment was carried downstream because of dredging Deposit N.

The project will provide important information about cleanup costs associated with removal, disposal, transport, treatment, permitting, construction siting, land use, monitoring and public outreach. Such information will be a valuable addition to the whole-river cleanup plan that the agency is currently developing. The project also aimed to remove PCBs without negatively affecting the river, its users and local residents. Cleanup went on day and night during November and December, but the DNR worked with local residents and industry to minimize the disruption

to the community. Treatment occurred on shore in the midst of a residential neighborhood, while dredging happened adjacent to an industrial intake pipe and dam in the river.

The dredging project planned for Sediment Management Unit 56/57, an area of contamination four miles above the river's mouth, has been postponed until this summer, at the earliest. The agency is currently facing critical issues such as finding a disposal site and deciding the project's scope.

Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/13/99

FOX RIVER CURRENT

EPA Explains The National Priorities List

EPA is currently deciding if the Lower Fox River should be included on the NPL.

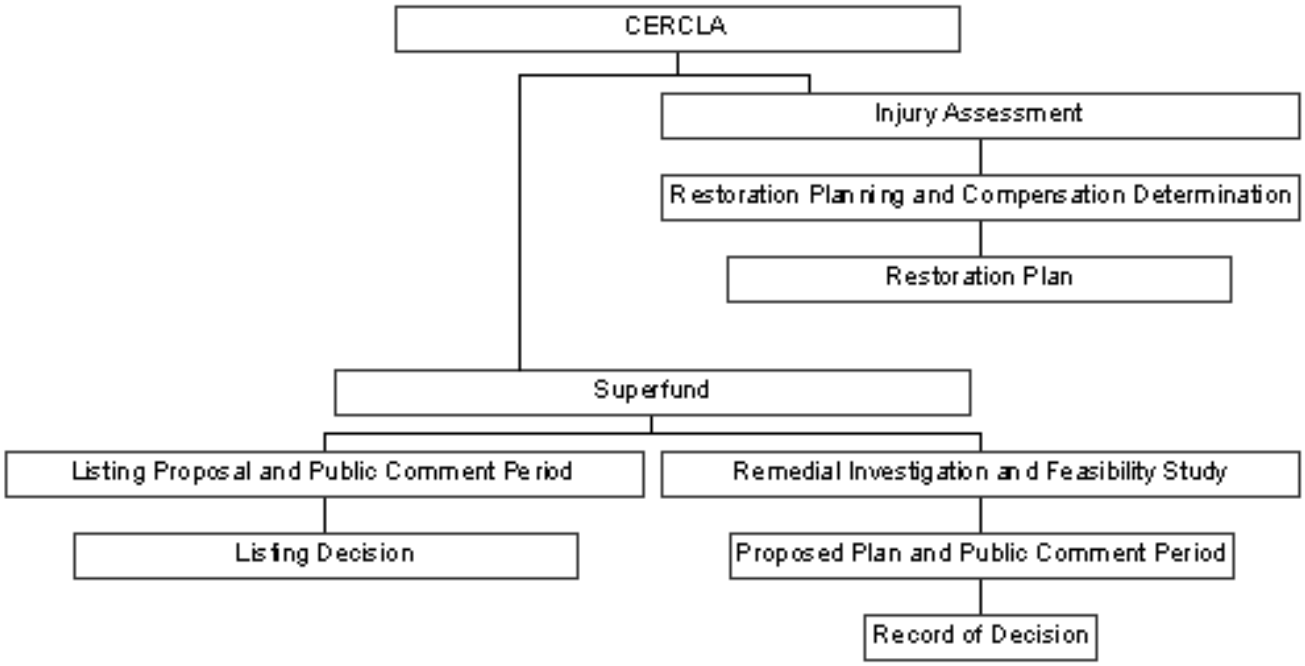
Since the Lower Fox River was proposed for the National Priorities List (NPL) in July 1998, many questions have been raised concerning the process that leads to final inclusion on the NPL. This article will attempt to address some of the most commonly asked questions.

The NPL is a roster of the nation's most serious uncontrolled hazardous waste sites. The NPL informs the public of sites that the U.S. Environmental Protection Agency (EPA) has determined to require further investigation. These investigations ascertain whether the sites represent a long-term threat to public health or the environment and subsequently need cleanup.

First, all proposed NPL sites go through preliminary assessments -- basically literature searches of all available and pertinent information about the sites and their surrounding areas. Findings are compiled in a preliminary assessment report that may recommend further investigations, called site inspections.

Site inspections typically consist of collecting environmental and waste samples to determine which hazardous substances are present. If results indicate eligibility for NPL inclusion, then information from the preliminary assessment and site inspection are used to "score" sites based on a simple, numerically based process. Called the Hazard Ranking System (HRS), each site is assigned a score ranging from zero to 100. Scores are based on the likelihood that sites have released or may release contaminants into the environment, the characteristics of the waste, and the people or sensitive environments affected by the release. The HRS also considers risks to ground water, surface water, air and soil. Sites that score at least 28.5 may be proposed for the NPL.

Finally, a notice of the proposal is placed in the Federal Register and a 60-day public comment period begins. At the end of the comment period, EPA evaluates all written comments submitted by mail, fax or E-mail. EPA compiles comments and develops responses that agree or disagree with them. EPA recommends whether or not to add a site to the final NPL based on these responses. There is no set time frame for making a final determination, but it typically takes EPA up to a year to review all of the documentation before deciding whether or not to put a site on the NPL.



Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/13/99

FOX RIVER CURRENT

Superfund Facts

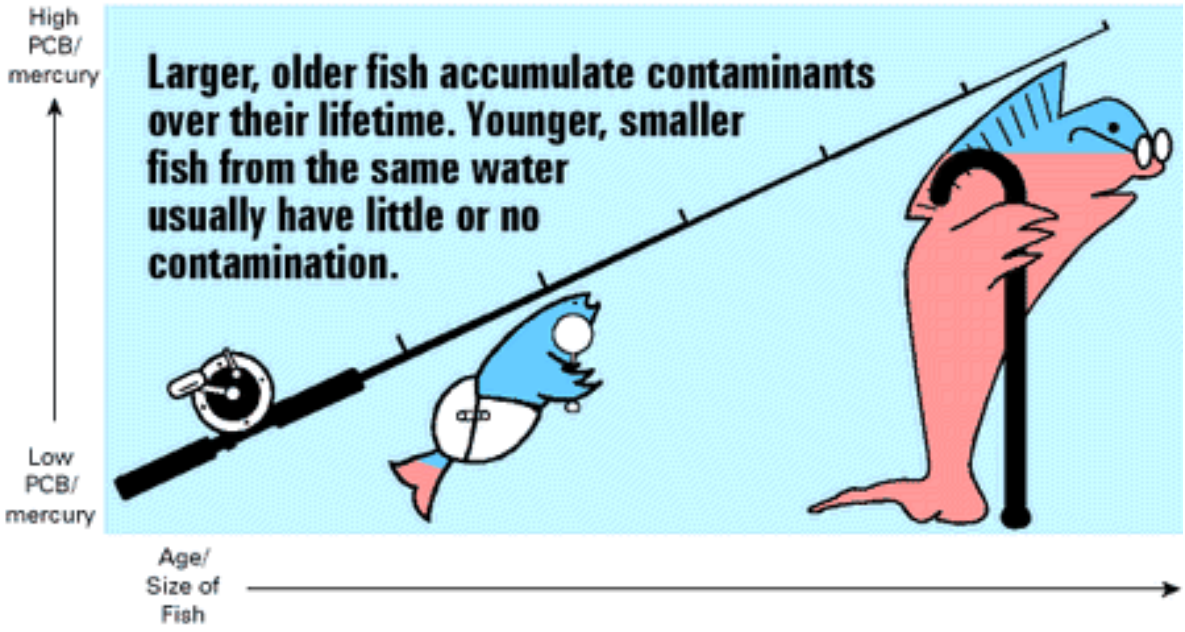
- More than 89 percent of sites nationally (approximately 1,300) on the final National Priorities List (NPL) are undergoing cleanup construction or completion
- As of early 1998, 509 Superfund sites had all cleanup construction completed.
- Approximately 950 sites have all final cleanup plans approved.
- More than 4,800 emergency cleanup actions have occurred at hazardous waste sites to immediately reduce threats to public health and the environment.
- Taxpayers save close to $15 billion because responsible parties are funding 70 to 75 percent of long-term cleanups.
- Since Superfund's inception, EPA has achieved more than $7 in private cleanup commitments and cost recovery for every $1 spent on legal actions.
- The Superfund enforcement program has reached settlements with more than 15,000 small parties.
- More than 30,500 sites have been removed from the Superfund computer files to help promote the economic redevelopment of these properties.
- In Wisconsin, 24 of the 42 NPL sites have been cleaned up. Three more have been removed from the Superfund list.
- Approximately 75 percent of EPA's Superfund budget has been spent on site cleanup and response, 8 percent has been spent on legal costs, and 17 percent has been spent on miscellaneous support.
- Most NPL sites in EPA Region 5, which includes Wisconsin, require about five years to get from the Remedial Investigation (RI) to cleanup when more detailed studies are necessary. The Lower Fox River was proposed for the NPL last summer, and a recommended cleanup plan should be completed about a year from that time.

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/13/99

FOX RIVER CURRENT

Eating Fish From The Lower Fox: Is It Safe?

While sport anglers are catching trophy walleyes in the Lower Fox River, many of the fish remain unsafe to eat because of polychlorinated biphenyls (PCBs). The Wisconsin Department of Natural Resources (DNR) and the Department of Health and Family Services (DHFS) have been offering advice about eating fish from the Fox River since 1976. Most unsafe fish are high in fat, older, or eat other fish - like catfish, carp, white bass and larger walleyes. Usually, a person can reduce the amount of PCBs in fish by removing fat and skin and cooking in a way that allows juices to drip off. However, many of the fish in the Lower Fox River remain unsafe even after properly cleaning and cooking.



You can get a copy of the most recent statewide fish advisory Important Health Information for People Eating Fish from Wisconsin Water. This booklet talks about the health benefit from eating fish and the risks from mercury- and PCB-contaminated fish. It provides a diagram for filleting and describes the safest methods for cooking fish. In several tables, it offers suggestions about how often certain fish should be eaten. If you would like a copy of the most recent advisory, please contact Irene Sadowski at 608-264-8952. In addition to fish, certain ducks and other waterfowl may also have high levels of PCBs. The DNR is currently updating its waterfowl advisory.

DNR and DHFS offer advice based on a 150-pound person eating a half pound (before cooking) of fish. The following advice is offered:

For fish caught on the Lower Fox River between Little Lake Butte des Morts and the DePere Dam, you should

1. eat no more than one meal per week (52 per year) of yellow perch.
2. eat no more than one meal per month (12 per year) of walleye, northern pike, white bass, white perch, and smallmouth bass.
3. not eat carp.

For fish caught on the Lower Fox River between the DePere Dam and Green Bay, you should

1. eat no more than one meal per month (12 per year) of walleye under 16 inches, northern pike under 25 inches, rock bass, bluegill, sheepshead under 10 inches, yellow perch, and black crappie under 9 inches.
2. eat no more than one meal every two months (6 per year) of walleye that are 16-22 inches, northern pike over 25 inches, white suckers, smallmouth bass, sheepshead 10-13 inches, black crappie over 9 inches, and white perch.
3. not eat walleye over 22 inches, white bass, carp, channel catfish, and sheepshead over 13 inches.

Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/13/99

FOX RIVER CURRENT

NOAA Working Toward Cleanup And Restoration With Other Intergovernmental Partners

The National Oceanic and Atmospheric Administration (NOAA), is a federal environmental science and service agency located within the U.S. Department of Commerce. As its name indicates, NOAA is involved in a wide range of environmental matters related to oceans, coastal areas and climate. NOAA's overall mission focuses on environmental assessment/prediction and environmental stewardship. To fulfill this mission, NOAA works to research and predict changes in the natural systems that make up our earth's environment. NOAA uses this information to help conserve and manage our coastal and marine resources wisely. Environmental assessment, prediction and stewardship are keystones to sustaining our natural resources and economic opportunities, as well as our health and quality of life.

NOAA's programs function on the basis that these goals are interrelated and can be pursued simultaneously in partnership with federal and state environmental agencies, industry and the public. It is NOAA's experience in applying science to achieve these goals and its stewardship role that brings this agency to the Great Lakes, Green Bay and the Lower Fox River.

In the Great Lakes, as on our ocean coasts, NOAA works on behalf of the Secretary of the United States Department of Commerce, alongside the federal and state agencies and tribes that manage fish, wildlife, lands and waters. In Green Bay and the Lower Fox River, the Wisconsin Department of Natural Resources (DNR), the U.S. Fish and Wildlife Service (FWS), the Oneida and the Menominee share their own stewardship mission with NOAA as natural resource trustees. Each trustee brings its own expertise, experience and authorities to the site. NOAA's trusteeship extends to cover natural resources and supporting ecosystems, including fisheries, aquatic resources and navigation channels. Except for state-managed ground water, this trusteeship is shared among the natural resource trustees.

In Green Bay and the Lower Fox River, NOAA is concerned with the protection and restoration of aquatic natural resources, coastal habitats, waterways and the services provided by these resources, including fishing and commerce. The waterways, wetlands and sediments of the Lower Fox River, Green Bay and Lake Michigan support fish, cormorants, bald eagles, and many other natural resources.

All of these resources depend on each other within this watershed ecosystem. Their health is interconnected with the public's ability to use and enjoy them. In much the same way, the natural resource trustees must be interconnected in their efforts to protect and restore the resources

harmed by the releases of hazardous substances like polychlorinated biphenyls (PCBs). NOAA is working with the other partners in the ongoing natural resource damage assessments to determine how to restore or "bring back" fish, wildlife and habitat. At the same time, NOAA and the other natural resource trustees are coordinating with EPA to achieve a cleanup that will protect and prevent further injuries to these same natural resources in the Lower Fox River basin and Green Bay.

The cleanup and restoration of the area present complex environmental and social issues. Contamination that injures natural resources like rivers and lakes can also impact our own health and well being. Contamination can prevent the public's use and enjoyment of natural resources when fisheries close and when fish advisories and access restrictions are placed on public lands and waterways. NOAA will assist in integrating science into the decision-making processes to achieve the overall goal for the Lower Fox River and Green Bay -- halting the harm to natural resources and restoring the health of these waters for the public's use and enjoyment for generations to come.

Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/13/99

FOX RIVER CURRENT

Profile On...

Dale Patterson

Dale Patterson was instrumental in the development of computer models that are leading to cleanups of the Lower Fox and Wisconsin rivers. Regulation of pollution on Wisconsin waterways is based almost entirely on his work. He developed a national reputation during his 25 years working for the Wisconsin Department of Natural Resources (DNR), where he was in charge of the water-quality modeling that helps the department manage watersheds.

Patterson's career was cut short when he was killed in a plane crash near Oakdale, Wisconsin last fall. The September 16 crash also took the lives of pilot John Sherman and Mike Witt, who supervised DNR's specialized discharges section.

Most recently, Patterson had led a team in developing and evaluating models for cleaning up polychlorinated biphenyl (PCB)-contaminated sediments on the Lower Fox River, known as the Fox River and Green Bay PCB Fate and Transport Model. The model provides the best possible estimate of how PCBs got into the river and how much pulp and paper industries and wastewater treatment plants discharged between 1954 and 1988. (More information on this modeling document is available in the August '98 issue of the Fox River Current.)

> "... most everyone involved with modeling had a lot of respect for him, and his modeling was well known and recognized across the country."

Bruce Baker, deputy administrator for DNR's water division, met Patterson in college where they worked together on the same research project.

"Even then he was very serious about science," Baker recalls. "Dale paid attention to details, and he was always precise in the work he did."

During the 1970s, Patterson worked on the Fox River Waste Load Allocation. The report estimated the amount of PCBs in the river and how they move over time.

"Dale's modeling efforts were constantly under scrutiny, but his work has held up over time," Baker says.

Baker says Patterson felt privileged to work on the Green Bay Mass Balance Study and other

projects with national modeling experts.

"He was rather humble, however, and did not believe that he was in same league as the 'national experts,'" Baker says. "Ironically, most everyone involved with modeling had a lot of respect for him, and his modeling was well known and recognized across the country."

"We can't duplicate the things he was able to do," Baker admits. "He could have left the DNR at any time to be a private consultant, and we would have been lost. We never dreamed that this is the way that he would leave us."

Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 04/13/99

FOX RIVER CURRENT

For More Information

Review technical reports, summary fact sheets, and other information at the Information Repositories

- **Appleton Public Library**, 225 N. Oneida St., Appleton, WI 54911-4780; 920-832-6170
- **Brown County Library**, 515 Pine St., Green Bay, WI 54301; 920-448-4381, ext. 394
- **De Pere Public Library**, 380 Main Ave., De Pere, WI 54115; 920-448-4407
- **Door County Library**, 104 S. Fourth St., Sturgeon Bay, WI 54235; 920-743-6578
- **Kaukauna Public Library**, 111 Main Ave., Kaukauna, WI 54130; 920-766-6340
- **Little Chute Public Library**, 625 Grand Ave., Little Chute, WI 54140; 920-788-7825
- **Neenah Public Library**, 240 E. Wisconsin Ave., Neenah, WI 54956; 920-751-4722
- **Oneida Community Library**, 201 Elm St., Oneida, WI 54165; 920-869-2210
- **Oshkosh Public Library**, 106 Washington Ave., Oshkosh, WI; 920-236-5200
- **Wrightstown Public Library**, 529 Main St., Wrightstown, WI 54180; 920-532-4011

Check out these Web sites

- www.dnr.state.wi.us/org/water/wm/lowerfox/ EXIT EPA
- www.epa.gov/region5/foxriver/
- http://www.fws.gov/r3pao/nrda/index.html EXIT EPA
- www.fws.gov/r3pao/eco_serv/env_cont/ EXIT EPA

Search | About Region 5 | Home | Comments

Page maintained by: Jeff Kelley, Office of Public Affairs
URL: www.epa.gov/region5/foxriver/
Last updated: 06/05/00

Fox River Current is published bimonthly by the Fox River Intergovernmental Partnership. Its purpose is to provide up-to-date information about cleanup and restoration efforts on the Lower Fox River. Subscription and alternative-format requests can be made by calling Irene Sadowski at 608-264-8952. Feedback on articles and ideas for future issues are welcome. Send comments to: Irene Sadowski, Editor, *Fox River Current*, DNR, CE/6, P.O. Box 7921, Madison, WI 53707 or e-mail sadowi@dnr.state.wi.us.